


CROSS REFERENCE TO RELATED APPLICATION

This application claims priority from Provisional Application Serial No. 60/468,807 filed May 8, ²⁰⁰³~~2002~~.

5 BACKGROUND OF THE INVENTION1. Field of the Invention

This invention relates generally to rolling mills for rolling long products, e.g., rods, bars and the like, and is concerned in particular with an improvement to the so-called "cantilevered"

10 roll stands, where the work rolls are mounted on the distal ends of support shafts.

2. Description of the Prior Art

Cantilevered work rolls are conventionally mounted on the distal ends of parallel support shafts. The shafts are journaled for rotation in axially spaced work and drive side bearings

15 contained in eccentric sleeves, the latter in turn being mounted for rotatable adjustment in a cartridge housing. The roll shafts carry gears arranged to mesh with gears of the mill drive, and by simultaneously rotating the eccentric sleeves in opposite directions, symmetrical adjustments are imparted to the work rolls with respect to the mill pass line.

A more detailed description of this conventional arrangement can be had by reference to

20 U.S. Patent No. Re 28,107, the disclosure of which is herein incorporated by reference.

With the advent of smaller diameter work rolls, roll shaft diameters are also of necessity decreased, resulting in shaft lengths being excessively long in comparison to their diameters. Although the conventional two bearing arrangement can satisfy strength requirements reasonable well, the same is not true for stiffness, and shaft deflection becomes a problem.